

Air Pressure

Station materials:

- Mason Jars w/out screen (4)
- Mason Jars with screen (4)
- Plastic dish pans (4)
- Pitchers (4)
- Rectangles cut from the bottom of Styrofoam plates (12-15)

Station set-up:

Set up four stations of materials

- Dish pan
- One jar w/out screen
- One jar with screen
- Pitcher filled with water
- Styrofoam rectangle

Guiding the learning:

You may want to demonstrate this for students first.

DO THIS OVER THE WASH BASIN to avoid water mess.

- Fill jar w/out screen with water
- Place styrofoam over opening of jar
- Invert jar while holding styrofoam
- Ask students what will happen when you remove the hand that is holding styrofoam
- Remove hand (styrofoam **SHOULD**) stay in place, holding water in jar

- Ask students... WHY? (Pressure of air pushing up on card is greater than the force of the water pushing down because air pressure is spread out over the entire card) NOTE: water will stay in jar with card holding it in IF you hold the jar as perfectly horizontal as possible. As soon as you tilt the jar the air pressure will not be equal, the card will fall and the water will come out so DO THIS ALL OVER THE WASHBASIN
- Now fill jar with screen and repeat process except this time when you remove the card, the water stays in the jar
- Ask the students why?
- The screen allows water in, but not out (as long as the jar is held horizontal)

Note in this picture that the teacher is holding the mason jar “flat” or horizontal. The student is holding it on an angle.

